**ICTSUS6233A Integrate sustainability in ICT planning and design projects – Assessment**

**General Notes**

This unit describes the performance outcomes, skills and knowledge required to integrate sustainability concepts and policies into ICT planning and design projects. It involves accessing industry information and applying legislative and occupational health and safety (OHS) guidelines.

Technical managers, supervising technicians, project managers, consultants or contractors in organisations conducting ICT planning or design projects apply the skills and knowledge in this unit.

Typical ICT projects involve upgrades of equipment hardware and software or new installations of Next Generation Networks (NGN) using emerging technologies.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the ability to:

 plan and integrate sustainability into ICT projects by devising strategies to conserve resources

 analyse energy audit data on enterprise resource consumption

 develop and monitor policies for review and improvements, benchmarking against industry best practice and attempting new approaches continuously over time.

**Individual Assignment**

A major assignment has been developed as a vehicle for enhancing a student's appreciation of integrating sustainability into ICT planning and design. This assignment has been incorporated into the syllabus. The feedback both from the students and from industry has indicated that such an approach to the teaching of ICT is beneficial from an educational standpoint and is favourably received by prospective employers.

The assignment comprises a project with presentation; and an individual report.

## Individual Project

**Scenario**

The individual is required to

* Negotiate with the stakeholders to establish the extent to which sustainability is to be integrated
* Determine and oversee implementation of short term technology solutions to achieve reduction of power consumption
* Identify energy usage within the scope of the ICT project and provide a detailed report

**Project**



The project could concentrate on installing a thin client network for a small school with solar panels, gel batteries, inverter and a small network of 20 desktop PC’s including a server, providing service to a classroom that has fluorescent lighting. Classes operate between the hours 8.30am to 3.30pm (7.00 hours)

Assumptions:

• The existing computer network is ON 5 days per week 24 hours per day

• The existing classroom lighting is ON 5 days per week 10 hours per day

The project requires the following:

1. Preparing to integrate sustainability into the planning and design stages the ICT project

2. Devising a strategy for incorporating sustainability into the ICT project

3. Analyse energy audit data from the project

## Activities

Complete the following tasks:

* Project
* Presentation
* Report

**PROJECT**

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| --- | --- | --- |
| **Task** | **Mark** | **Performance Criteria** |
| Negotiate with the stakeholders to establish the extent to which sustainability is to be integrated | 20% | 1.2 |
| Determine and oversee implementation of short term technology solutions to achieve reduction of power consumption | 30% | 2.1 |
| Identify energy usage within the scope of the ICT project and provide a detailed report | 30% | 3.1 |
| PowerPoint presentation | 20% | Elements 1-3 |

**PowerPoint Presentation**

Present your project to the class in about 10 PowerPoint slides in particular covering:

• The Basics of preparing to integrate sustainability into ICT planning and design projects;

• ICT sustainability from a business standpoint;

• Energy efficiency as a stepping stone to sustainability;

• Project Strategy

• Network operations and security;

• Sketch of the recommended project system;

• Test results

• Short term technology solutions to achieve reduction of power consumption;

• Energy usage within the ICT project

• Recommendations and Conclusion.

**INDIVIDUAL REPORT**

|  |  |  |
| --- | --- | --- |
| **Task** | **Mark** | **Performance Criteria** |
| Evaluate suitable ICT projects into which sustainability can be integrated | 10% | 1.1 |
| Research and identify suitable technology solutions applicable to the project | 10% | 1.3 |
| Gather power consumption data on ICT equipment required for an energy audit based on an agreed standard | 10% | 1.4 |
| Initiate and progress sustainable management principles which result in reduced environmental impact | 10% | 2.2 |
| Establish, regularly review and improve key performance indicators (KPI) on sustainability performance | 10% | 2.3 |
| Incorporate innovative planning and design rules for ICT projects which foster sustainability and environmental best practice | 10% | 2.4 |
| Estimate potential energy savings and payback periods for recommended actions | 10% | 3.2 |
| Estimate the carbon dioxide (CO2) emissions for the nominated project | 10% | 3.3 |
| Evaluate the estimated CO2 emissions with comparable benchmarks | 10% | 3.4 |
| Make recommendations in order of priority and give estimates of implementation costs on integration of sustainability for other ICT projects | 10% | 3.5 |